

**01411840 CHATFIELD BRANCH AT CARMEL, NJ**

MAURICE RIVER BASIN

LOCATION.--Lat 39°25'58", long 75°07'06" referenced to North American Datum of 1983, Millville City, Cumberland County, NJ, Hydrologic Unit 02040206, at bridge on County Route 608 (Carmel Road) in Carmel, 0.9 mi upstream of Mill Creek, 2.8 mi east of Fordville, and 4.4 mi southeast of Woodruff.

DRAINAGE AREA.--4.86 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Miscellaneous measurements, water years 2011-12.

GAGE.--Reference point only.

**DISCHARGE MEASUREMENTS**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

| <b>Date</b>  | <b>Discharge,<br/>in ft<sup>3</sup>/s</b> |
|--------------|---|
| Jun 6, 2012  | 0.44                                      |
| Sep 10, 2012 | 0.17                                      |

## 01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2011, 2012.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

REMARKS.--Cooperative Network Site Descriptor: HUC14, NJ Department of Environmental Protection Watershed Management Area 17.

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 1 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than]

| Date       | Sample start time | Barometric pressure, mm Hg (00025) | Temperature, air, °C (00020) | Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units per cm (50624) | Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units per cm (61726) | Discharge, instantaneous, ft <sup>3</sup> /s (00061) | Dissolved oxygen, unfiltered, mg/L (00300) | Dissolved oxygen, unfiltered, % saturation (00301) | pH, water, unfiltered, field, standard units (00400) |
|------------|-------------------|------------------------------------|------------------------------|---|---|--|--|--|--|
| 12-21-2011 | 0900              | 762                                | 10.0                         | 0.318   | 0.249   | --   | 6.4  | 56   | 5.0  |
| 03-19-2012 | 1030              | 768                                | 15.5                         | .451  | .356  | --   | 5.6  | 54   | 5.1  |
| 06-06-2012 | 1100              | 763                                | 21.7                         | .317  | .256  | .43  | 6.0  | 59   | 6.0  |
| 09-10-2012 | 1115              | 760                                | 20.9                         | .414  | .328  | .17  | --   | --   | 5.5  |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 2 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than]

| Date       | Sample start time | Specific conductance, water, unfiltered, μS/cm at 25°C (00095) | Temperature, water, °C (00010) | Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676) | Dissolved solids dried at 180°C, water, filtered, mg/L (70300) | Dissolved solids, water, filtered, sum of constituents, mg/L (70301) | Hardness, water, mg/L as CaCO <sub>3</sub> (00900) | Suspended solids, water, unfiltered, mg/L (00530) | Calcium, water, filtered, mg/L (00915) |
|------------|-------------------|--|--------------------------------|--|--|--|--|---|--|
| 12-21-2011 | 0900              | 63   | 9.4                            | 1.3  | 45   | < 36   | 12.0   | 2.0   | 2.07                                   |
| 03-19-2012 | 1030              | 61   | 13.0                           | 5.7  | 47   | < 33   | 11.3   | 6.0   | 1.85                                   |
| 06-06-2012 | 1100              | 59   | 14.6                           | 9.7  | 42   | 37   | 12.1   | 13  | 1.87                                   |
| 09-10-2012 | 1115              | --   | 16.8                           | 4.0  | 43   | 34   | 11.3   | 2.0   | 1.54                                   |

## 01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 3 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date       | Sample start time | Magnesium, water, filtered, mg/L (00925) | Potassium, water, filtered, mg/L (00935) | Sodium, water, filtered, mg/L (00930) | ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO <sub>3</sub> (90410) | Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694) | Chloride, water, filtered, mg/L (00940) | Fluoride, water, filtered, mg/L (00950) | Inorganic carbon, suspended sediment, total, mg/L (00688) | Silica, water, filtered, mg/L as SiO <sub>2</sub> (00955) |
|------------|-------------------|--|--|---------------------------------------|--|--|---|---|---|---|
|            |                   |  |  |                                       | < 1.74   | 0.45   |   |   |   |   |
| 12-21-2011 | 0900              | 1.67                                     | 1.44                                     | 4.29                                  | < 1.74   | 0.45   | 8.99                                    | < .04                                   | < .03   | 7.23  |
| 03-19-2012 | 1030              | 1.62                                     | 1.46                                     | 4.64                                  | < 1.74   | 2.48   | 8.98                                    | < .04                                   | < .03   | 4.57  |
| 06-06-2012 | 1100              | 1.80                                     | 1.56                                     | 4.59                                  | 3.19   | .57  | 8.86                                    | .05                                     | < .03   | 7.67  |
| 09-10-2012 | 1115              | 1.82                                     | 1.43                                     | 4.95                                  | 2.05   | 1.05   | 9.54                                    | < .04                                   | < .03   | 8.70  |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 4 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date       | Sample start time | Sulfate, water, filtered, mg/L (00945) | Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623) | Ammonia, water, filtered, mg/L as N (00608) | Nitrate plus nitrite, water, filtered, mg/L as N (00631) | Particulate nitrogen, suspended in water, mg/L (49570) | Phosphorus, water, filtered, mg/L as P (00666) | Phosphorus, water, unfiltered, mg/L as P (00665) | Total nitrogen, water, filtered, mg/L (00602) | Total nitrogen, water, unfiltered, mg/L (00600) |
|------------|-------------------|--|---|---|--|--|--|--|---|---|
|            |                   |  | 0.29  | 0.036                                       | 1.30   | 0.030  | 0.006  | 0.011  | 1.6   | 1.6   |
| 12-21-2011 | 0900              | 3.81                                   | 0.29  | 0.036                                       | 1.30   | 0.030  | 0.006  | 0.011  | 1.6   | 1.6   |
| 03-19-2012 | 1030              | 2.68                                   | .47   | .031  | 1.28   | .161   | .012   | .022   | 1.7   | 1.9   |
| 06-06-2012 | 1100              | 1.97                                   | .42   | .096  | 1.46   | .061   | .016   | .142   | 1.9   | 1.9   |
| 09-10-2012 | 1115              | 1.68                                   | .53   | .177  | .697   | .195   | .031   | .047   | 1.2   | 1.4   |

## 01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 5 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date       | Sample start time | Barium, water, unfiltered, recoverable, µg/L (01007) | Beryllium, water, unfiltered, recoverable, µg/L (01012) | Cadmium, water, unfiltered, µg/L (01027) | Chromium, water, unfiltered, recoverable, µg/L (01034) | Copper, water, unfiltered, recoverable, µg/L (01042) | Iron, water, unfiltered, recoverable, µg/L (01045) | Lead, water, unfiltered, recoverable, µg/L (01051) | Manganese, water, unfiltered, recoverable, µg/L (01055) | Mercury, water, unfiltered, recoverable, µg/L (71900) |
|------------|-------------------|--|---|--|--|--|--|--|---|---|
| 12-21-2011 | 0900              | --   | --  | --                                       | --   | --   | --   | --   | --  | --  |
| 03-19-2012 | 1030              | 43.4   | .13   | .048                                     | .34  | < .70  | 422  | 1.45   | 18.3  | < .005  |
| 06-06-2012 | 1100              | --   | --  | --                                       | --   | --   | --   | --   | --  | --  |
| 09-10-2012 | 1115              | 38.7   | .07   | .030                                     | < .30  | < .70  | 479  | .56  | 22.6  | .006  |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date       | Sample start time | Nickel, water, unfiltered, recoverable, µg/L (01067) | Silver, water, unfiltered, recoverable, µg/L (01077) | Zinc, water, unfiltered, recoverable, µg/L (01092) | Arsenic, water, filtered, µg/L (01000) | Arsenic, water, unfiltered, µg/L (01002) | Boron, water, unfiltered, recoverable, micrograms per liter (01022) | Selenium, water, unfiltered, µg/L (01147) | Organic carbon, suspended sediment, total, mg/L (00689) | Organic carbon, water, filtered, mg/L (00681) |
|------------|-------------------|--|--|--|--|--|---|---|---|---|
| 12-21-2011 | 0900              | --   | --   | --   | --                                     | --                                       | --  | 0.44                                      | 6.56  |   |
| 03-19-2012 | 1030              | 1.4  | < .015   | 6.3  | .55                                    | .55                                      | 14  | .107                                      | 2.47  | 7.45  |
| 06-06-2012 | 1100              | --   | --   | --   | --                                     | --                                       | --  | .57                                       | 5.21  |   |
| 09-10-2012 | 1115              | 1.2  | < .015   | 4.1  | .82                                    | .88                                      | 10  | .073                                      | 1.05  | 7.36  |

## 01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 10

[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | 1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49295) | 2,6-Diethyl-aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660) | 2-Chloro-2',6'-diethyl-acetanilide, water, filtered, recoverable, µg/L (61618) | 2-Chloro-4-isopropyl-amino-6-aminotriazine, water, filtered, recoverable, µg/L (04040) | 2-Ethyl-6-methyl-aniline, water, filtered, recoverable, µg/L (61620) | 3,4-Dichloro-aniline, water, filtered, recoverable, µg/L (61625) | 3,5-Di-chloro-aniline, water, filtered, recoverable, µg/L (61627) | 4-Chloro-2-methyl-phenol, water, filtered, recoverable, µg/L (61633) | Aceto-chlor, water, filtered, recoverable, µg/L (49260) |
|------------|-------------------|--|---|--|--|--|--|---|--|---|
| 06-06-2012 | 1100              | < .0360  | < .0060   | < .010   | E .004   | < .010   | < .0060  | < .006  | < .0080  | < .010  |

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 10

[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Alachlor, water, filtered, recoverable, µg/L (46342) | alpha-Endo-sulfan, water, filtered, recoverable, µg/L (34362) | Atrazine, water, filtered, recoverable, µg/L (39632) | Azinphos-methyl oxygen analog, water, filtered, recoverable, µg/L (61635) | Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82686) | Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82673) | Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82680) | Carbofuran, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82674) |
|------------|-------------------|--|---|--|---|---|---|--|--|
| 06-06-2012 | 1100              | 0.010  | < .006  | 0.004  | < .042  | < .120  | < .014  | < .060   | < .060   |

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 10

[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Chlorpyrifos oxygen analog, water, filtered, recoverable, µg/L (61636) | Chlorpyrifos, water, filtered, recoverable, µg/L (38933) | cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687) | cis-Propicon-azole, water, filtered, recoverable, µg/L (79846) | Cyanazine, water, filtered, recoverable, µg/L (04041) | Cyfluthrin, water, filtered, recoverable, µg/L (61585) | Cypermethrin, water, filtered, recoverable, µg/L (61586) | DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82682) | Desulfynil-fipronil amide, water, filtered, recoverable, µg/L (62169) |
|------------|-------------------|--|--|--|--|---|--|--|--|---|
| 06-06-2012 | 1100              | < .08  | < .0036  | < .010   | < .008   | < .022  | < .016   | < .020   | < .0076  | < .029  |

## 01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Desulfinyl-fipronil, water, filtered, recoverable, µg/L (62170) | Diazinon, water, filtered, recoverable, µg/L (39572) | Dichlorvos, water, filtered, recoverable, µg/L (38775) | Dicrotophos, water, filtered, recoverable, µg/L (38454) | Dieldrin, water, filtered, recoverable, µg/L (39381) | Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82662) | Disulfoton sulfone, water, filtered, recoverable, µg/L (61640) | Disulfoton, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82677) | Endosulfan sulfate, water, filtered, recoverable, µg/L (61590) |
|------------|-------------------|---|--|--|---|--|--|--|--|--|
| 06-06-2012 | 1100              | < .012  | < .0060  | < .04  | < .08   | < .008   | < .0100  | < .014   | < .040   | < .016   |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | EPTC, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82668) | Ethion monoxon, water, filtered, recoverable, µg/L (61644) | Ethion, water, filtered, recoverable, µg/L (82346) | Ethoprop, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82672) | Fenamiphos sulfone, water, filtered, recoverable, µg/L (61645) | Fenamiphos sulfoxide, water, filtered, recoverable, µg/L (61646) | Fenamiphos, water, filtered, recoverable, µg/L (61591) | Fipronil sulfide, water, filtered, recoverable, µg/L (62167) | Fipronil sulfone, water, filtered, recoverable, µg/L (62168) |
|------------|-------------------|--|--|--|--|--|--|--|--|--|
| 06-06-2012 | 1100              | < .0056  | < .021   | < .010   | < .016   | < .054   | < .08  | < .030   | < .012   | < .024   |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Fipronil, water, filtered, recoverable, µg/L (62166) | Fonofos, water, filtered, recoverable, µg/L (04095) | Hexazinone, water, filtered, recoverable, µg/L (04025) | Iprodione, water, filtered, recoverable, µg/L (61593) | Isofenphos, water, filtered, recoverable, µg/L (61594) | lambda-Cyhalothrin, water, filtered, recoverable, µg/L (61595) | Malaoxon, water, filtered, recoverable, µg/L (61652) | Malathion, water, filtered, recoverable, µg/L (39532) | Metalaxyl, water, filtered, recoverable, µg/L (61596) |
|------------|-------------------|--|---|--|---|--|--|--|---|---|
| 06-06-2012 | 1100              | < .018   | < .0048   | < .012   | < .014  | < .008   | < .010   | < .022   | < .016  | < .014  |

## 01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Methidathion, water, filtered, recoverable, | Methyl paraoxon, water, filtered, recoverable, | Methyl parathion, water, filtered, recoverable, | Metolachlor, water, filtered, recoverable, | Metribuzin, water, filtered, recoverable, | Molinate, water, filtered, recoverable,  | Myclobutanol, water, filtered, recoverable, | Oxyfluorfen, water, filtered, recoverable, | Pendimethalin, water, filtered, recoverable, |
|------------|-------------------|---|--|---|--|---|--|---|--|--|
|            |                   | (61598)                                     | (61664)  | (0.7 micron glass fiber filter), (82667)        | (0.7 micron glass fiber filter), (39415)   | (0.7 micron glass fiber filter), (82630)  | (0.7 micron glass fiber filter), (82671) | (0.7 micron glass fiber filter), (61599)    | (0.7 micron glass fiber filter), (61600)   | (0.7 micron glass fiber filter), (82683)     |
| 06-06-2012 | 1100              | < .012                                      | < .014   | < .008  | 0.006                                      | < .012                                    | < .0040                                  | < .010                                      | < .010                                     | < .012                                       |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Phorate oxygen analog, water, filtered, recoverable, | Phorate, water, filtered, recoverable,   | Phosmet oxygen analog, water, filtered, recoverable, | Phosmet, water, filtered, recoverable,   | Prometon, water, filtered, recoverable,  | Prometryn, water, filtered, recoverable, | Propanil, water, filtered, recoverable,  | Propargite, water, filtered, recoverable, | Propyzamide, water, filtered, recoverable, |
|------------|-------------------|--|--|--|--|--|--|--|---|--|
|            |                   | (61666)  | (0.7 micron glass fiber filter), (82664) | (0.7 micron glass fiber filter), (61668)             | (0.7 micron glass fiber filter), (61601) | (0.7 micron glass fiber filter), (04037) | (0.7 micron glass fiber filter), (04036) | (0.7 micron glass fiber filter), (82679) | (0.7 micron glass fiber filter), (82685)  | (0.7 micron glass fiber filter), (82676)   |
| 06-06-2012 | 1100              | < .027   | < .020                                   | < .0511  | < .080                                   | < .012                                   | < .010                                   | < .010                                   | < .020                                    | < .0036                                    |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

| Date       | Sample start time | Simazine, water, filtered, recoverable, | Tebu-thiuron, water, filtered, recoverable, | Tefluthrin, water, filtered, recoverable, | Terbufos oxygen sulfone, water, filtered, recoverable, | Terbufos, water, filtered, recoverable,  | Terbutyl-azine, water, filtered, recoverable, | Thioben-carb, water, filtered, recoverable, | trans-Propicon-azole, water, filtered, recoverable, | Tribuphos, water, filtered, recoverable, |
|------------|-------------------|---|---|---|--|--|---|---|---|--|
|            |                   | (04035)                                 | (0.7 micron glass fiber filter), (82670)    | (0.7 micron glass fiber filter), (61606)  | (0.7 micron glass fiber filter), (61674)               | (0.7 micron glass fiber filter), (82675) | (0.7 micron glass fiber filter), (04022)      | (0.7 micron glass fiber filter), (82681)    | (0.7 micron glass fiber filter), (79847)            | (0.7 micron glass fiber filter), (61610) |
| 06-06-2012 | 1100              | < .006                                  | < .028                                      | < .014                                    | < .045   | < .018                                   | < .008  | < .016                                      | < .018  | < .018                                   |

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**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2011 TO  
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[µg/L, micrograms per liter; <, less than;  
E, estimated]

| Date       | Sample start time | Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661) |
|------------|-------------------|---|
| 06-06-2012 | 1100              | <.018   |

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 1 of 6  
[mm, millimeters; <, less than; E, estimated]

| Date       | Sample start time | Moisture content, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, percent (49282) | pH, bed sediment, standard units (70310) | Carbon (inorganic plus organic), bed sediment, total, dry weight, grams per kilogram (00693) | Inorganic carbon, bed sediment, total, dry weight, grams per kilogram (00686) | Phosphorus, bed sediment, total, dry weight, milligrams per kilogram as phosphorus (00668) | Cadmium, bed sediment, recoverable, dry weight, milligrams per kilogram (01028) | Chromium, bed sediment, recoverable, dry weight, milligrams per kilogram (01029) | Cobalt, bed sediment, recoverable, dry weight, milligrams per kilogram (01038) | Copper, bed sediment, recoverable, dry weight, milligrams per kilogram (01043) |
|------------|-------------------|---|--|--|---|--|---|--|--|--|
| 09-10-2012 | 1115              | 23  | 6.37                                     | 3.8  | <.2   | 40   | <.100   | 2.4  | 0.6  | 2  |

01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 2 of 6

[mm, millimeters; <, less than; E, estimated]

| Date       | Sample start time | Iron, bed sediment, total digestion, dry weight, milligrams per kilogram (01170) | Lead, bed sediment, recoverable, dry weight, milligrams per kilogram (01052) | Manganese, bed sediment, recoverable, dry weight, milligrams per kilogram (01053) | Mercury, bed sediment, recoverable, dry weight, milligrams per kilogram (71921) | Nickel, bed sediment, recoverable, dry weight, milligrams per kilogram (01068) | Zinc, bed sediment, recoverable, dry weight, milligrams per kilogram (01093) | Arsenic, bed sediment, recoverable, dry weight, milligrams per kilogram (64847) | Selenium, bed sediment, recoverable, dry weight, milligrams per kilogram (64848) | p-Cresol, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49451) |
|------------|-------------------|--|--|---|---|--|--|---|--|---|
| 09-10-2012 | 1115              | 2,600  | 3.6  | 7.7   | 0.007   | 1.5  | 5.3  | 0.4   | < .1   | < 50  |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 3 of 6

[mm, millimeters; <, less than; E, estimated]

| Date       | Sample start time | PCBs, bed sediment, recoverable, dry weight, micrograms per kilogram (39519) | 1,2-Dimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49403) | 1,6-Dimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49404) | 1-Methyl-9H-fluorene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49398) | 1-Methylphenanthrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49410) | 1-Methylpyrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49388) | 2,3,6-Trimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49405) | 2,6-Dimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49406) | 2-Ethyl-naphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49948) |
|------------|-------------------|--|--|--|---|---|---|---|--|--|
| 09-10-2012 | 1115              | < 5.00   | 12   | 20   | 40  | 180   | 160   | 21  | 22   | E 9  |

01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 4 of 6

[mm, millimeters; <, less than; E, estimated]

| Date | Sample start time | 2-Methylanthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49435) | 4H-Cyclopenta[def]phenanthrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49411) | 9H-Fluorene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49399) | Acenaphthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49429) | Acenaphthylene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49428) | Anthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49434) | Benzo[a]anthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49436) | Benzo[a]pyrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49389) | Benzo[b]fluoranthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49458) |
|------|-------------------|---|---|--|---|---|---|---|---|---|
|      |                   | 09-10-2012  | 1115  | 76   | 120   | 43  | 16  | 110   | 99  | 360   |

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 5 of 6

[mm, millimeters; <, less than; E, estimated]

| Date | Sample start time | Benzo[ghi]perylene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49408) | Benzo[k]fluoranthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49397) | Chrysene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49450) | Dibenzo[a,h]anthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49461) | Fluoranthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49466) | Indeno[1,2,3-cd]pyrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49390) | Isophorone, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49400) | Naphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49402) | Phenanthrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49409) |
|------|-------------------|---|---|---|---|---|---|---|--|---|
|      |                   | 09-10-2012  | 1115  | 190   | E 160   | 440   | E 66  | 550   | E 180  | < 50  |

01411840 CHATFIELD BRANCH AT CARMEL, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 6 of 6

[mm, millimeters; <, less than; E, estimated]

| Date       | Sample<br>start time | Phenanthri<br>dine, bed<br>sediment<br>smaller<br>than 2<br>millimeter<br>s, wet<br>sieved<br>(native<br>water),<br>field,<br>recoverabl<br>e, dry<br>weight,<br>microgram<br>s per<br>kilogram<br>(49393) | Pyrene,<br>bed<br>sediment<br>smaller<br>than 2<br>millimeter<br>s, wet<br>sieved<br>(native<br>water),<br>field,<br>recoverabl<br>e, dry<br>weight,<br>microgram<br>s per<br>kilogram<br>(49387) | Bed<br>sediment,<br>fall<br>diameter<br>(deionized<br>water),<br>percent<br>smaller<br>than 0.004<br>millimeter<br>s<br>(80157) | Bed<br>sediment,<br>dry sieved,<br>sieve<br>diameter,<br>percent<br>smaller<br>than 0.0625<br>mm<br>(80164) |
|------------|----------------------|--|---|---|---|
| 09-10-2012 | 1115                 | 12   | 720   | 0.0   | 0.0   |